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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,255	08/22/2001	Ronald A. Weimer	MTI-31529	1208
31870	7590	10/07/2003	EXAMINER	
WHYTE HIRSCHBOECK DUDEK S.C. 111 E. WISCONSIN AVE. SUITE 2100 MILWAUKEE, WI 53202			CHEN, JACK S J	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/935,255	WEIMER, RONALD A.
	Examiner	Art Unit
	Jack Chen	2813

-- The MAILING DATE of this communication appears on the cover sheet with the corr spondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 11 July 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-57 and 73-121 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) \_\_\_\_\_ is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) 1-57, 73-121 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____

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### **DETAILED ACTION**

1. In response to the communications dated December 17, 2002 through July 10, 2003, claims 1-57 and 73-121 are active in this application.
2. Applicant's request for reconsideration of the restriction requirement of the Office actions dated 11/19/2002 through 3/11/03 are persuasive and, therefore, the restriction of that actions are withdrawn.

#### ***Election/Restriction***

3. This application contains claims directed to the following patentably distinct species of the claimed invention:

One from each of the following groups must be elected:

A. Method for forming silicon layer (see specification, pp. 2, 6-7)

A-1. PECVD

A-2. LPCVD

A-3. RTCVD

A-4. Low partial pressure

A-5. Specific partial pressure (i.e.,  $10^{-2}$  or less)

B. Method for forming silicon nitride layer (See specification, pp. 7)

B-1. Downstream microwave system

B-2. Electron cyclotron resonance system

- B-3. Inductive coupled plasma system
- B-4. Radio frequency system
- B-5. Remote microwave plasma source
- C. Silicon (See specification, pp. 2, 6)
  - C-1. Polysilicon
  - C-2. Amorphous silicon
- D. Gate dielectric (See specification, pp. 6)
  - D-1. Oxide
  - D-2. Silicon dioxide
  - D-3. Tantalum pentoxide
  - D-4. Hafnium dioxide
  - D-5. Aluminum trioxide
- E. Silicon source materials (See specification, pp. 6)
  - E-1. SiH<sub>2</sub>
  - E-2. Si<sub>2</sub>H<sub>7</sub>
  - E-3. SiH<sub>2</sub>Cl<sub>2</sub>
  - E-4. SiCl<sub>4</sub>
  - E-5. SiH<sub>4</sub>
  - E-5. Si<sub>2</sub>H<sub>6</sub>
- F. Nitrogen-containing gases (See specification, pp. 7)

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F-1. N<sub>2</sub>

F-2. NH<sub>3</sub>

F-3. NF<sub>3</sub>

F-4. N<sub>2</sub>O<sub>x</sub>

G. Gate stacks (See specification, pp. 7-8)

G-1. Gate oxide/doped polysilicon/WN/W/nitride

G-2. Gate oxide/doped polysilicon/WSix/TiSix/CoSix/nitride

4. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 81 is generic.

5. Applicant is advised that a reply to this requirement must *include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon*, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

6. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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7. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

8. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Chen whose telephone number is (703) 308-5838. The examiner can normally be reached on Monday-Friday (alternate Monday off) from 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached on (703)308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

A handwritten signature in black ink, appearing to read "Sarkesh", is written over a horizontal line.

Jack Chen

Primary Examiner

October 6, 2003